

River Flooding Optioneering: Effectiveness

Containment (Within River Channels)



This category of options successfully contains the flow within the channel, protecting the surrounding area. However, limitations prevented the wall being extended beyond a height which would restrict views of the surrounding area, in turn limiting the degree that flood risk from rivers can be reduced.

Conveyance (Alteration of Bridges)



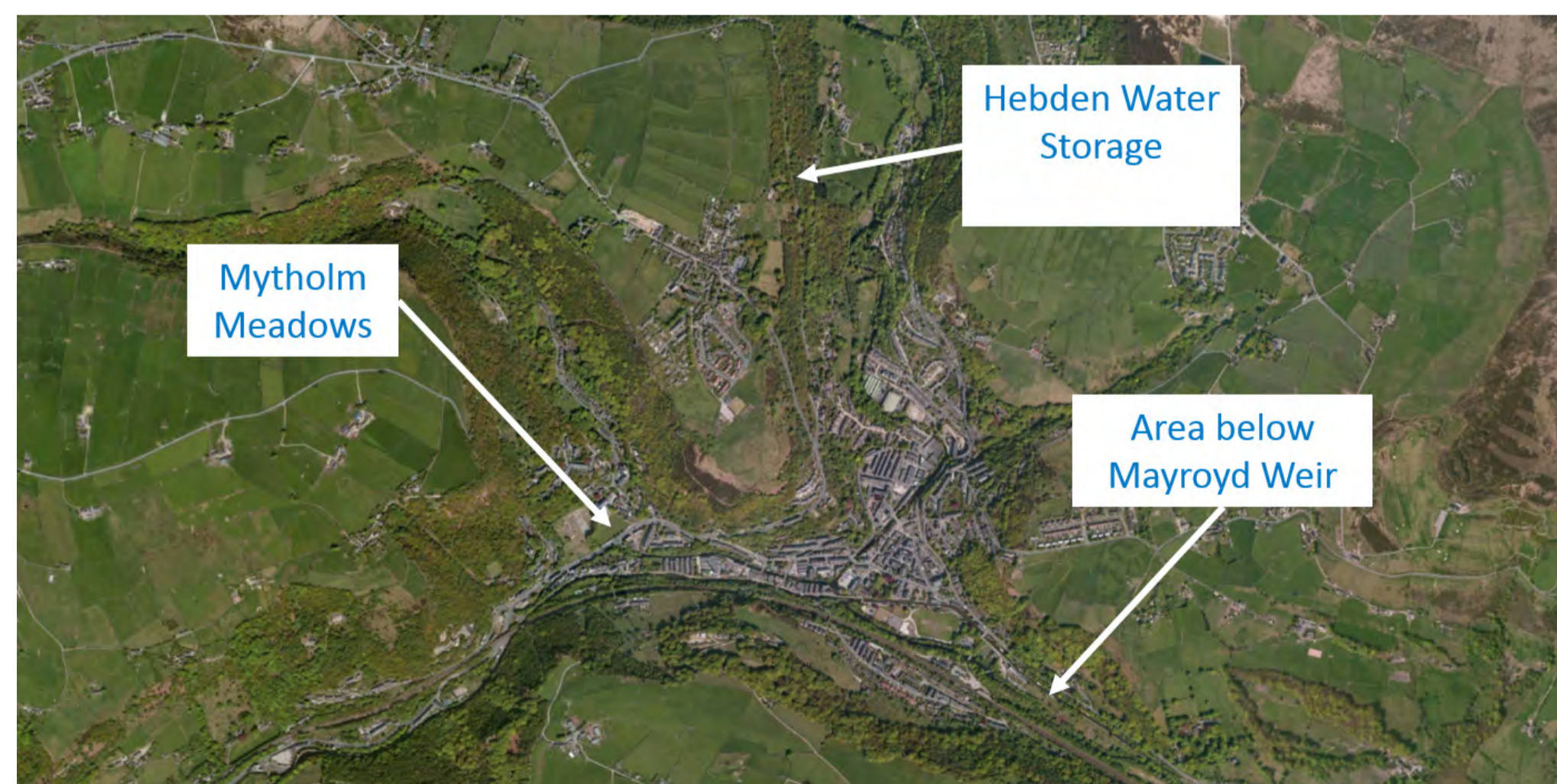
Modifying or removing Stubbing Holme Road bridge (pictured) and New Road bridge has a significant benefit on reducing flooding when combined with the containment option. However, it would not be feasible to completely remove the bridges which would reduce access through the town. In addition they are protected for their heritage value and within a conservation area so any modification would be difficult and costly.

Conveyance (Channel Reprofiling)



Significant reprofiling of the channel such as removing weirs and channel constrictions has only limited beneficial effects on flooding within Hebden Bridge.

Storage and NFM (Within the Catchment)



Other than the existing water supply reservoirs, the storage volume available in the catchment compared to the volume of flood water leads to limited benefits as only part of the flood volume could potentially be stored, with the remainder still reaching the town. With regards to NFM, the options need to be implemented across the entire catchment meaning it is difficult to quantify the benefits from smaller storage or intervention options, and they may be limited to small flood events. Additionally, the construction of these storage areas would be costly for the limited benefit.

Conveyance (Channel Confluence)



Amending the configuration of the aqueduct and the immediate area around the river confluence could have a significant benefit in reducing flooding when combined with the containment option. However, the structure would have to be considerably altered. The aqueduct is 'listed' for its heritage value, the entire confluence holds critical infrastructure and it is part of a conservation area. Disruption to the area therefore outweighs the benefits realised when compared to other options.

Conveyance (Downstream Modifications)



Options to reduce downstream water levels, such as removal of obstructions and increasing the capacity of the channel, only have limited beneficial impact in the centre of Hebden Bridge upstream of the aqueduct.

Performance Summary Key

- Modelling shows little or no benefit
- Modelling shows significant benefit, other constraints mean these options are less preferable
- Modelling shows significant benefit, other constraints acceptable